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Repeated Poisonous Snakebites in Man

POISONOUS SNAKEBITES are far from rare in the United States. This is particularly true in the Southeast and the Southwest. The number of snakebite accidents has been estimated at from 2,000 to 3,000 annually and there were 71 deaths due to snakebites during the five years, 1950-1954.

One of the more interesting aspects of this problem is the occurrence of repeated bites by poisonous snakes in the same individual.[1] Persons who handle poisonous snakes routinely in the course of their work or for some other reason are likely to sustain such accidents. Among biologists, especially herpetologists and curators of reptiles in zoos and museums, and among religious faddists who use poisonous reptiles in their ceremonies, poisonous snakebites are an occupational hazard. Watt, Parrish, and Polard, for instance, have reported the case of a professional herpetologist who was bitten by 10 poisonous snakes in a period of 12 years and survived.

What are the consequences of such repeated bites in the same individual? It has been commonly held that repeated poisonous bites render the victim immune to venom and reduce the danger of future bites; that the person will develop an allergy to the proteins of the snake poison, thus making subsequent bites more dangerous because of the possibility of an anaphylactic reaction; and that previous bites by poisonous snakes have no effects on subsequent bites. Parrish and Pollard examined this problem in terms of the case histories of 14 patients who were bitten two or more times by North American pit vipers and concluded on the evidence from these cases that bites by pit vipers do not produce permanent immunity. This conclusion may be the result of several factors, such as the administration of antivenin, bites by different species of pit vipers, and prolonged and irregular intervals between envenomations. Furthermore, these investigators found hypersensitivity to pit viper venoms and they conclude that death may result from snake venom allergy. Finally, this study indicates that blood from patients with a history of previous bites by pit vipers is no better for transfusions in treating snakebites than the blood of persons who have not been bitten. The practice of transporting snakebite victims long distances for such transfusions should be discouraged. Certainly, all those concerned with accidents will be interested in this report and its implications.

[1] Parrish, Henry M., and Pollard, C. B. Effects of Repeated Poisonous Snakebites in Man. Am. J. M. Sc. 237:277–286, 1959.